



Preliminary datasheet

Genexis FiberTwist

PX2100-Series (PtP)

Compact and high-speed network demarcation



Where GPON and Point-to-Point (PtP) are starting to hit bandwidth limitations, 10G provides a solution. The well-known FiberTwist offers an easy Do-It-Yourself (DIY) upgrade path from PtP to 10G Point-to-Point: increasing the end-user's bandwidth with a single twist.

With the FiberTwist product range, Genexis introduces a unique broadband connectivity solution that redefines size, ease of installation and flexibility for the distribution of fiber bandwidth throughout the entire home.

Key features

- Compact, fully managed Point-to-Point network demarcation
- Patented FiberTwist twist-on interface that fits all FiberTwist FTUs and Bracket; enabling an easy DIY end-user installation
- One 10GE LAN port to meet the higher speed demand of connected devices in the home
- Available with integrated CATV receiver
- Optional 1G and 10G PtP WAN connection on same wavelength for easy upgrading
- Flexible management via i.a. TR-069 and CloudSight
- ITU-T K.21 Basic level (Surge Protection)
- Halogen-free PCB
- Recycled plastics
- Enhanced LED dimming

A perfect Match for every deployment scenario

The Genexis FiberTwist product family has been developed in such a way that it can be integrated into various deployment scenarios. Using products from the FiberTwist FTU family, the demarcation point can be extended to any desired location in the home, enabling easy access and installation of services.

Its small size (110 x 110 x 46 mm) makes the FiberTwist a perfect fit in any environment, be it a living room, metering cabinet or basement.

The FiberTwist PX2100-Series is the perfect next step in a Point-to-Point network to enable higher speeds in every deployment scenario.

Product features and specifications



Genexis FiberTwist PX2100-Series (PtP)

General specifications

Dimensions (H x W x D)	110x110x46 mm
Weight	
· PX2110	182 gr
· PX2117	182 gr
· PX2120	212 gr
Operating temperature	0 - 45 °C
Storage temperature	-25 - 55 °C
Operating humidity	5% - 95%
Storage humidity	10% - 95%
Flame retardants	Halogen free
Power supply voltage	12 Vdc ± 5%

Power consumption (EU-CoC-BBE)

Model	Ready Mode	On Mode
PX2110	3.9 W	3.9 W
PX2117	3.9 W	3.9 W
PX2120	5.5 W	5.5 W

Fiber (WAN) interface

Optics compliance	
· PX2110/PX2120	10GBASE-BX-10U
· PX2117	10GBASE-BX-10U and supports 1GBASE-BX-10U
Single mode fiber	ITU-T G.657.A2
Optical connector	SC/APC
Optical Range	Up to 10km
Digital Diagnostic Monitoring (DDM)	
TX (upstream) power	
· FiberTwist PX2110/PX2120	-2.2...0.8 dBm
· FiberTwist PX2117	-4 dBm
RX sensitivity	
· FiberTwist PX2110/PX2120	-15 dBm
· FiberTwist PX2117	-15 dBm (10G) or -20 dBm (1G)
TX wavelength (typical)	
· FiberTwist PX2110/PX2120	1270 nm
· FiberTwist PX2117	1310 nm
RX wavelength (typical)	
· FiberTwist PX2110/PX2120	1330 nm
· FiberTwist PX2117	1490...1550 nm

LAN interfaces

1x 10GE: Compliant with 1000/2.5G/5G/10G BASE-T

- IEEE 802.3an-2006 for 10G
- IEEE 802.3bz (nbase-t 2,5G/5G)
- IEEE 802.3az Energy Efficient Ethernet

LED indicators for speed and activity

User interfaces

1 x Unlock button

1 x LED dimming button

1x LAN interface

1 x Power button

1 x Reset button

1 x CATV output coaxial F-female*

CATV*

Wavelength (typical)	1550 nm
Optical return loss	min 40 dB
RF passband	45-900 MHz
RF output impedance	75 Ω
F-Connector length	8,5 mm
AGC optical input power	-9 ... 0 dBm
RF output level (AGC on)	80 ± 2.5 dBμV
RF flatness	max 2 dB
Output return loss	max -10 dB
Slope / tilt	1 ... 4 dB
CNR min	47 dB@-8 dBm
CSO / CTB	max -57 dBc
Spurious to carrier	max -57 dBc
MER QAM-64	> 35
MER QAM-256	> 37
BER	max 1.0E-9
Remote management via TR-069	

* Applicable to selected models only

Product features and specifications



Genexis FiberTwist PX2100-Series (PtP)

Layer 2 features

Jumbo up to 9K supported on WAN and LAN
 Non-blocking switching performance
 Up to 8K MAC addresses
 Automatic learning and aging
 IEEE 802.1Q VLAN support for 4096 VLANs
 VLAN classification and retagging (VLAN mapping)
 Port-based VLANs
 IEEE 802.1ad QinQ VLAN tagging
 Port Trunking and Monitoring/Mirroring
 Layer 2 loop prevention

Quality of Service (QoS)

8 QoS traffic classes
 Port based QoS
 IEEE 802.1p tagged frames
 IPv4 QoS Type of Service (ToS)
 IPv4 QoS Differentiated Services (DS)
 IPv6 QoS Traffic Class
 Strict, weighted, or mixed mode per port

Management

DHCP/TFTP, HTTP
 TR-069, TR-369, TR-181
 CLI
 CloudSight
 Ethernet OAM including dying gasp
 GUI





IGMP

IGMP/MLD (v2/v3) snooping and proxy
 Configurable parameters for e.g. robustness, fast leave and snooping behavior

Emissions and safety regulations

CE approved
 Safety:
 · IEC EN 62368-1
 · BS EN 62368-1
 Laser safety:
 · IEC 60825-1: Class 1 laser
 Emissions & Immunity:
 · EN 55032/CISPR 32, Class B
 · EN 55035
 RoHS/WEEE marking:
 · Compliant with 2011/65/EU
 Surge protection
 · Compliant with ITU-T K.21 basic level

Status LEDs

Power/Alarm 
 Fiber uplink status 
 LAN 
 CATV status* 

* Applicable to selected models only

Genexis FiberTwist PX2100-Series product models

Model	Type	WAN (Mbps)	10GE LAN	Wavelength		
				TX	RX	CATV
FiberTwist PX2110	Layer-2 PtP ONT	10000	1x	1270 nm	1330 nm	-
FiberTwist PX2117	Layer-2 PtP ONT	1000/10000	1x	1310 nm	1490...1550 nm	-
FiberTwist PX2120	Layer-2 PtP ONT	10000	1x	1270 nm	1330 nm	1550 nm

Note: More features are available and not listed in this document. Not every listed feature may be included in the shipping product.

Genexis reserves the right to make changes of technical specifications, housing or design without prior notice.